ALESIS
NanoVerb

Reference Manual

Introduction

Thank you for purchasing the Alesis NanoVerb Effects Processor. To take full advantage of the NanoVerb's functions, and to enjoy long and trouble-free use, please read this user's manual carefully.

How To Use This Manual

This manual is divided into the following sections describing the various modes of the NanoVerb. Though we recommend you take time to read through the entire manual once carefully, those having general knowledge about effects devices should use the table of contents to reference specific functions.

Chapter 1: Your First Session with the NanoVerb. A basic introduction on operating the NanoVerb, auditioning the factory programs, and adjusting levels.

Chapter 2: Connections. This chapter explains how to connect the NanoVerb to an instrument, mixing console or an amplifier.

Chapter 3: Overview of Programs. A summary of the 16 programs in the NanoVerb, including the function of the Adjust knob.

Chapter 4: Description of Controls. An explanation of all connectors and knobs on the NanoVerb. Use this chapter as a quick reference guide when searching for specific information.

Chapter 5: Troubleshooting. This chapter contains troubleshooting tips and service information should problems occur.

Conventions

The knobs and rear panel connectors are referred to in this manual just as their names appear on the NanoVerb, using all capital letters and in brackets (*Example:* [INPUT] Knob, [ADJUST] Knob, etc.).

J *When something important appears in the manual, an icon (like the one on the left) will appear in the left margin. This symbol indicates that this information is vital when operating the NanoVerb.*

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CHAPTER 1

YOUR FIRST SESSION WITH THE NANOVERB

Unpacking and Inspection

Your NanoVerb was packed carefully at the factory, and the shipping carton was designed to protect the unit during shipping. Please retain this container in the highly unlikely event that you need to return the NanoVerb for servicing.

The shipping carton should contain the following items:

- This instruction manual
- Alesis NanoVerb with the same serial number as shown on shipping carton
- AC Power Supply Adapter (Alesis P3)
- NanoVerb Quick Guide/Program Chart
- Alesis warranty card

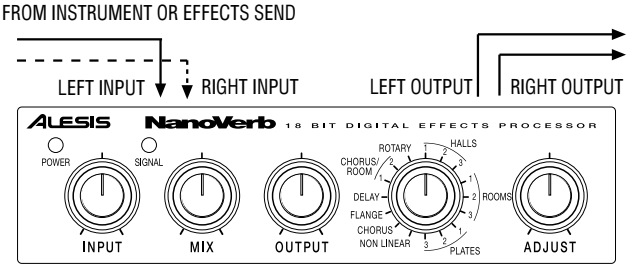
J *It is important to register your purchase; if you have not already filled out your warranty card and mailed it back to Alesis, please take the time to do so now.*

Basic Connections

The NanoVerb will work in many different applications, whether you are connecting an instrument directly into it, or connecting it with a mixing console. Briefly described here are the basic connections to get you up and running quickly. For more information on connections, please refer to Chapter 2.

- **Mono In, Mono or Stereo Out.** Connect a 1/4" phone cord to the [LEFT/MONO] INPUT of the NanoVerb from a mono source. (The Left input will then feed both inputs.) Connect another 1/4" phone cord from the [LEFT] OUTPUT of the NanoVerb to an amplification system or mixer input. Additionally, you could connect a second 1/4" phone cord to the [RIGHT] OUTPUT for use with a stereo amplification system, or two mixer inputs.

- **Stereo.** Connect two 1/4" phone cords to the [LEFT/MONO] & [RIGHT] INPUTS of the NanoVerb from a stereo source , and two 1/4" phone cords from the [LEFT/MONO] & [RIGHT] OUTPUTS of the NanoVerb to a stereo amplification system or two mixer inputs.



If connecting to a mixing console's aux sends/returns, you will want to turn the [MIX] knob fully clockwise so that the NanoVerb outputs only wet (effected) signal.

Powering Up

After making your connections, turn on the system's power using this procedure:

¿ Before turning on the NanoVerb's power, check the following items:

- Have all connections been made correctly?
- Are the volume controls of the amplifier or mixer turned down?

¡ Insert the Power jack into the [POWER] input on the rear panel of the NanoVerb and plug the power adapter into an AC outlet.

Upon power-up, the Power On LED will illuminate.

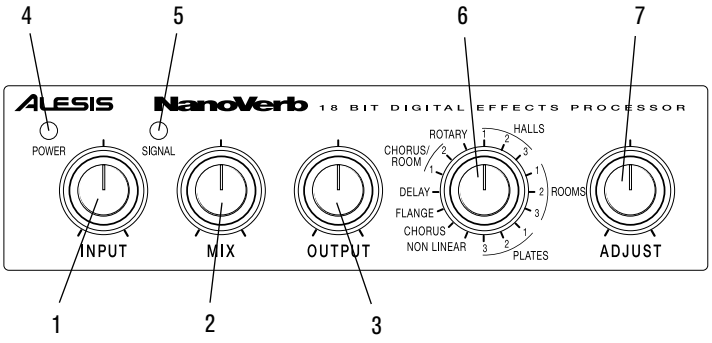
¬ Turn on the power of the amplifier/mixer, and adjust the volume.

Setting Levels

Proper setting of the input and output levels is crucial in order to achieve the maximum signal-to-noise ratio. As a good rule of thumb, it is usually best to set both input and output level controls at 3/4 or 75% of full. This will decrease the possibility of overload distortion and keep the amount of background noise to a minimum.

If the Signal LED on the NanoVerb begins to clip (turn red), turn down the Input level or decrease the volume of the source (instrument, mixer send, etc.). If the NanoVerb's level is causing the mixer or amp to distort, turn the Output Level down. For more detail on level setting, see page 25.

What's on the Front Panel?



The NanoVerb's front panel contains the following:

¨ Input. The Input level control sets the level going into the NanoVerb. This should be adjusted so that the Signal LED (•) is green when signal is going into the unit. It controls both the Left and Right Input levels simultaneously.

¡ Mix. The Mix control adjusts the balance between the direct signal coming into the input and the effects generated by the NanoVerb.

¬ Output. The Output level control sets the level going to the amplifier or mixer from the NanoVerb.

÷ Power LED. The Power LED is illuminated whenever the NanoVerb's power adapter is plugged in.

- Signal LED. The Signal LED displays the signal level coming into the Input. During normal operation, this LED should turn green whenever there is signal coming into the inputs. If the signal level is at the maximum, this LED will turn red and you will begin to hear the signal distort.

± Program Select. The Program Select Knob is used to choose the program you wish to use.

£ Adjust. Each program on the NanoVerb has one parameter which can be adjusted. Depending on the type of program selected, this knob might alter reverb decay, chorus depth, etc.

Auditioning Programs

The NanoVerb has 16 programs. These programs have been chosen to be the most useful effects available for a large variety of music styles. To audition the internal effect programs, turn the Program Select knob to scroll through each of the 16 presets.

Adjusting Effects Mix Levels

Whether a program contains a single effect or two or three effects, you can adjust the NanoVerb's [MIX] control to obtain a desirable balance between the original, uneffected signal and each effect's output. The [MIX] Knob controls the balance between the input signal and the effects generated by the NanoVerb. By turning [MIX] to the right allows you to hear more effects; turning it to the left lets you hear more of the source signal.

When hooked up to an instrument setup, such as a guitar amp, the Mix setting will typically be somewhere in the middle, balancing the effects with the sound of the source instrument. If the NanoVerb is connected to a mixing console's Aux Send, the [MIX] control should be set all the way to the right (effects only) so that the balance can be controlled from the board. When the [MIX] control is turned all the way to the left, you will only hear the direct signal (effects will be bypassed).

Editing Programs

Any of the internal programs on the NanoVerb may be editing using the [ADJUST] knob. The function of this knob will change depending on the Program selected. For example, it will adjust reverb decay on a Hall program and lezlie speed on the Rotary program.

J *The Adjust knob is always active, so when you change to a new program it will automatically read the Adjust knob setting.*

Bypassing Effects

At any time you can bypass the effects, thereby allowing the direct signal to pass through the NanoVerb unchanged. This can be done in two ways:

- by turning the MIX knob all the way to the left,
- by connecting a footswitch to the [BYPASS] jack and pressing the footswitch.

Each time the footswitch connected to the [BYPASS] jack is pressed, Bypass mode is toggled on and off again. For more information about the Footswitch, see page 20.

Placement and Installation

The NanoVerb may be mounted almost anywhere it's needed: on a table, on top of an amp, next to a mixing console. In any case, make sure to place it safely where it will not fall or be damaged. If it will be on furniture, make sure to attach the rubber feet provided to the bottom of the unit. While the NanoVerb itself doesn't generate any magnetic or hum fields, its power supply may do so. Make sure to place the power supply away from other audio equipment that is sensitive to induced fields, and away from the signal wiring. In rare instances, the NanoVerb itself may pick up noise fields generated by other equipment such as large power amplifiers; in this case, move the NanoVerb until the noise goes away.

Rack Mounting

The most secure mounting is on a "universal" rack shelf, available from various rack manufacturers or your music dealer. The NanoVerb's height conforms to single-space mounting, and up to three NanoVerbs may be mounted side-by-side in a standard universal EIA 19" equipment rack.

A hole is pre-threaded in the base of the NanoVerb to attach it to a rack. Use an M5 x 6 screw (included) to fasten the NanoVerb to your rack tray. There is an end stop in the screw hole to prevent longer screws from damaging the electronics.

CHAPTER 2

CONNECTIONS

AC Power Hookup

The NanoVerb comes with a power adapter suitable for the voltage of the country it is shipped to (either 110 or 220V, 50 or 60 Hz).

To turn on the NanoVerb, plug the small end of the power adapter cord into NanoVerb's [POWER] socket and the male (plug) end into a source of AC power. It's good practice to not plug in the NanoVerb until all other cables are hooked up.

J *Alesis cannot be responsible for problems caused by using the NanoVerb or any associated equipment with improper AC wiring.*

Line Conditioners and Protectors

Although the NanoVerb is designed to tolerate typical voltage variations, in today's world the voltage coming from the AC line may contain spikes or transients that can possibly stress your gear and, over time, cause a failure. There are three main ways to protect against this, listed in ascending order of cost and complexity:

- Line spike/surge protectors. Relatively inexpensive, these are designed to protect against strong surges and spikes, acting somewhat like fuses in that they need to be replaced if they've been hit by an extremely strong spike.
- Line filters. These generally combine spike/surge protection with filters that remove some line noise (dimmer hash, transients from other appliances, etc.).
- Uninterruptible power supply (UPS). This is the most sophisticated option. A UPS provides power even if the AC power line fails completely. Intended for computer applications, a UPS allows you to complete an orderly shutdown of a computer system in the event of a power outage, and the isolation it provides from the power line minimizes all forms of interference—spikes, noise, etc.

Audio Connections

The connections between the NanoVerb and your studio are your music's lifeline, so use only high quality cables. These should be low-capacitance shielded cables with a stranded (not solid) internal conductor and a low-resistance shield. Although quality cables cost more, they do make a difference. Route cables to the NanoVerb correctly by observing the following precautions:

- Do not bundle audio cables with AC power cords.
- Avoid running audio cables, or placing the NanoVerb itself, near sources of electromagnetic interference such as transformers, monitors, computers, etc.
- Never unplug a cable by pulling on the wire itself. Always unplug by firmly grasping the body of the plug and pulling directly outward.
- Do not place cables where they can be stepped on. Stepping on a cable may not cause immediate damage, but it can compress the insulation between the center conductor and shield (degrading performance), or reduce the cable's reliability.
- Avoid twisting the cable or having it make sharp, right angle turns.

Typical Applications

The audio inputs and outputs are typically used in one of three ways:

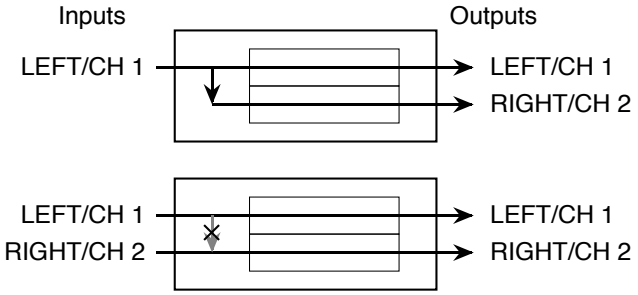
- from one or two effect/aux send outputs of a mixer, and out to the effect return inputs of the mixer; or,
- from a line-level instrument (like a guitar or keyboard with either a mono or stereo output), and out to an amplifier or mixer input; or,
- from the stereo buss outputs of a mixer to a mix-down tape machine or amplifier.

When used with a mono source, the NanoVerb is placed between the source and the mixer/amplifier. Although the source may be mono, both the [LEFT] and [RIGHT] outputs can be connected to the inputs of a mixer/amplifier if stereo processing effects are desired. If using the effect sends of a mixer, you have the advantage of sending any of the mixer's input channels to the NanoVerb's input(s), and have control over the level of each channel being sent.

These applications are outlined and illustrated in detail on the following pages.

Input Jack Wiring

The NanoVerb's [LEFT] INPUT jack is normalled to the [RIGHT] INPUT. This means that if you only connect a single mono cable to the [LEFT] INPUT jack, it will also be routed to the [RIGHT] INPUT. However, if anything is connected to the [RIGHT] INPUT jack, this normalized connection will be broken; in this case the [LEFT] INPUT jack will feed only the [LEFT] INPUT, and the [RIGHT] INPUT jack feeds only the [RIGHT] INPUT. Also, the [RIGHT] INPUT jack is **NOT** normalled to the [LEFT] INPUT.

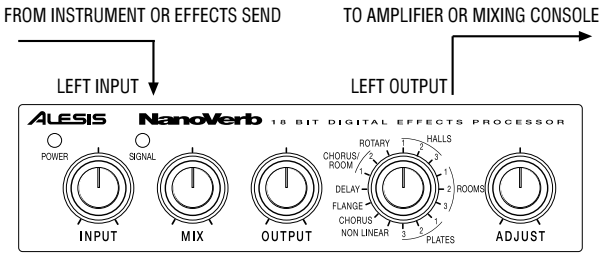


Connecting Directly to an Instrument

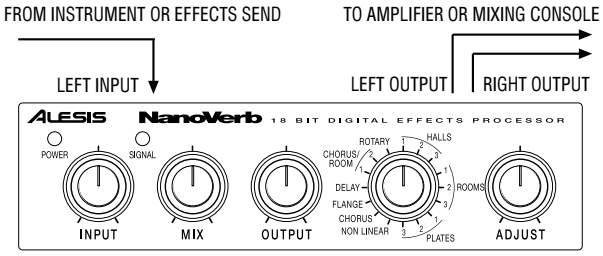
J *When connecting audio cables and/or turning power on and off, make sure that all devices in your system have their volume controls turned down.*

The NanoVerb has two 1/4" unbalanced inputs and two 1/4" unbalanced outputs. These provide three different audio hookup options:

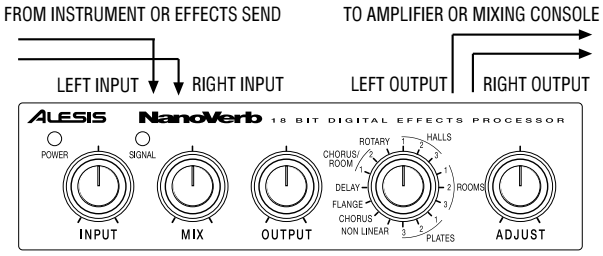
- **Mono.** Connect a 1/4" phone cord to the [LEFT] INPUT of the NanoVerb from a mono source, and another 1/4" phone cord from the [LEFT] output of the NanoVerb to an amplification system or mixer input.



- **Mono In, Stereo Out.** While still using a mono input, you could connect two 1/4" phone cords to the [LEFT] and [RIGHT] outputs of the NanoVerb to a stereo amplification system or two mixer inputs.



- **Stereo.** Connect two 1/4" phone cords to the [LEFT] and [RIGHT] INPUTS of the NanoVerb from a stereo source , and two other 1/4" phone cords from the [LEFT] and [RIGHT] OUTPUTS of the NanoVerb to a stereo amplification system or two mixer inputs.



Interfacing to a Mixing Console

The NanoVerb handles mono or stereo sends at all system levels. The input circuitry of the NanoVerb can easily handle professional +4 dBu levels (+20 dBu peaks), while having enough input and output gain to interface with the low -10 dBV signal levels of home recording systems.

The NanoVerb may be connected to a mixing console in several different ways. It can be used to effect multiple channels at once by using the auxiliary send and return controls of the mixer. Another method of interfacing is to connect the unit directly to the insert send and return patch points of a single channel that is to be effected. Still another way of interfacing the NanoVerb to a mixer or recording console would be in-line between the output of your mixing console and the input of a tape deck or power amplifier. This last setup would be used only if you wanted effects on the entire mix.

Using Aux Sends and Returns

Generally, mixing consoles provide two types of auxiliary sends: pre-fader sends for creating a cue (headphone or monitor) mix, and post-fader sends for effects units. Typically, if a mixer has more than two sends per channel (4, 6 or 8, perhaps), the first two sends are reserved for the cue sends, while the remaining sends are used to feed effects such as the NanoVerb. Connect the NanoVerb using post-fader sends, so that when you fade a channel out, its effects will fade also.

Using a mixer's aux sends allows each channel to have its own level control feeding the aux output (and eventually the NanoVerb input). You can make a mix of any channels you want to go to the effects by using the individual channels' aux send levels on the mixer. Most consoles also have aux master controls, which set the overall level of each aux output.

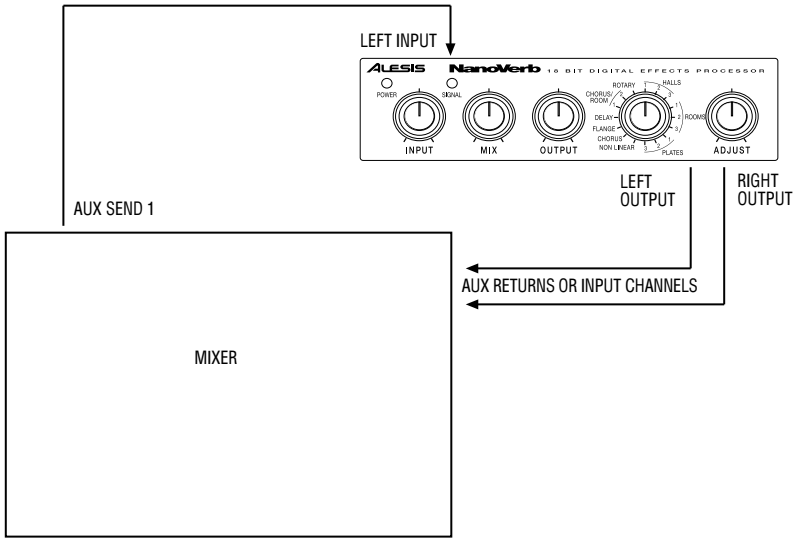
But sending signal to the Nanoverb is only half the story. With a mixing console, the output of the Nanoverb must be *returned* to the mixer and turned up in the mix before you can hear it. Depending on the design of your mixer, you have two options for returning the effected signal to the mix:

- connecting to dedicated aux return inputs, or
- connecting to channel inputs.

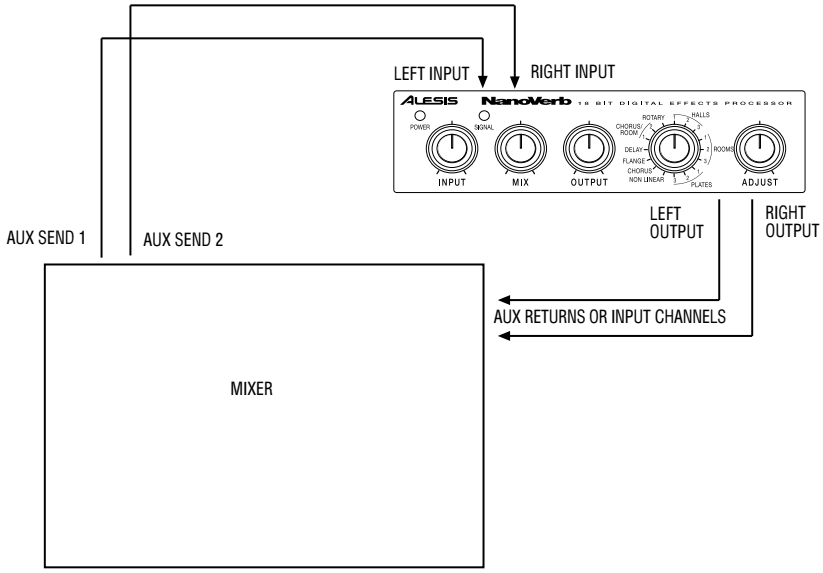
The former is good if your mixer provides dedicated inputs (called returns) for effect devices like the NanoVerb. If your mixer does not have these, or you have already used them all, consider connecting the NanoVerb to channel inputs (if there are any remaining). This method gives you the added bonus of more panning options and EQ on the effects.

No matter where you connect the output of the NanoVerb into the mixer, you are in control of the balance between the mixer's channel inputs (the uneffected signal being routed to the aux sends and the Mix), and the effect returns coming from the NanoVerb. The effect returns generally should only contain effected signal, and not have any uneffected or "dry" signal mixed with it (since these two signals are blended together at the mixer). Therefore, it is necessary to set the mix so that only effected ("wet") signal is present at the NanoVerb's outputs. To do this, turn the Mix control all the way to the right.

Mono In - Stereo Out. If you only want to feed the NanoVerb a mono input, but wish to connect both of its outputs back to the mixer, you will need three 1/4" audio cables. Connect a 1/4" phone cord from an effect send to the [LEFT] input of the NanoVerb, another 1/4" phone cord from the [LEFT] output of the NanoVerb to an effect return or other mixer input, and another 1/4" phone cord from the [RIGHT] output of the NanoVerb to an adjacent effect return or mixer input. The Nanoverb creates a stereo output, even though only a single input is used.



Stereo In - Stereo Out. This connection is similar to the one described above. However, by utilizing two sends from the mixer, we add one more cord and can now send a stereo signal to the NanoVerb's inputs. For example, if you connected sends 3 and 4 to the [LEFT] and [RIGHT] inputs, and had a stereo instrument (such as a keyboard) connected to two channel inputs of the mixer (either one panned hard left and hard right), you would send the left channel to send 3 and the right channel to send 4. This is especially useful on the true stereo chorus program; on reverb and delay programs only a mono input is needed.



How to Set Aux Send and Return Levels on the Mixer

In the above hookups, you must set correct levels on the mixer's individual Aux Sends, Aux Masters, and Aux Return masters (as well as the NanoVerb's own controls) to get good, clean, quiet results.

J *Improper level setting is the most common cause of noise and distortion problems.*

By having the correct level at every point in the send/return chain, you avoid distortion by overloading and avoid noise. *The most common mistake with effect units like the NanoVerb is to have too low a level at the input, then crank up the output to get the effects level desired.* This amplifies the noise and wastes headroom. Here is a procedure that will give good results with most standard equipment:

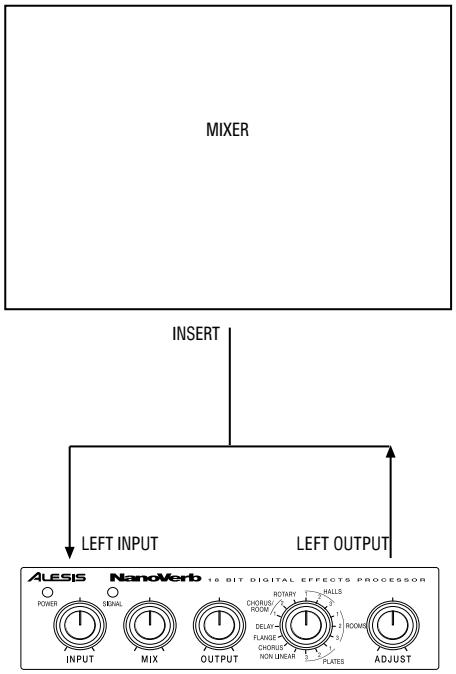
1. Set your mixer's input levels correctly, following the instructions for the mixer.
2. Turn up the mixer channels' AUX SEND and AUX MASTERS (if applicable) to a nominal level (this is usually between "noon" and "3:00" on a rotary knob).
3. Play the source.
4. Turn up the NanoVerb's [INPUT] level until you see the [SIGNAL] LED turn red on peaks; then reduce it slightly until the red doesn't flash. The ideal input level, for optimum noise performance, is just below clipping. But if other instruments will be added to the mix later, or levels are unpredictable (as in a live show), leave yourself additional headroom by turning the input level down a bit more.
5. Depending on the input sensitivity of the mixer's channels or Aux Returns, the [OUTPUT] knob of the NanoVerb should be set somewhere between "2:00" and fully clockwise ("5:00").
6. Turn up the AUX RETURN level until you get the desired level of effect in the mix. The one control in the chain that may need to be set to a low level is the Aux Return (or channel) on the mixer itself. Here is where you should increase or decrease the overall effect level in the mix, for best low-noise performance. If you want "just a hint" of reverb, don't turn down the send to the Nanoverb; turn down the Aux Return. Leave the input levels where they were set in step 4, unless you see the [SIGNAL] LED flash.

Using Inserts

If your mixer features individual channel inserts, you can dedicate the NanoVerb to a specific channel on the mixer. Insert jacks on the back of a mixer provide a way of “inserting” external processing equipment into the signal path. The insert occurs after the input amplifier, and before the channel fader; essentially it is the same as connecting the source (instrument or microphone) into the NanoVerb before the mixer’s channel input. However, some mixing console’s inserts come after the EQ section, and may therefore be different from the original signal. If nothing is connected to the channel’s Insert jack, the signal passes through with no effect.

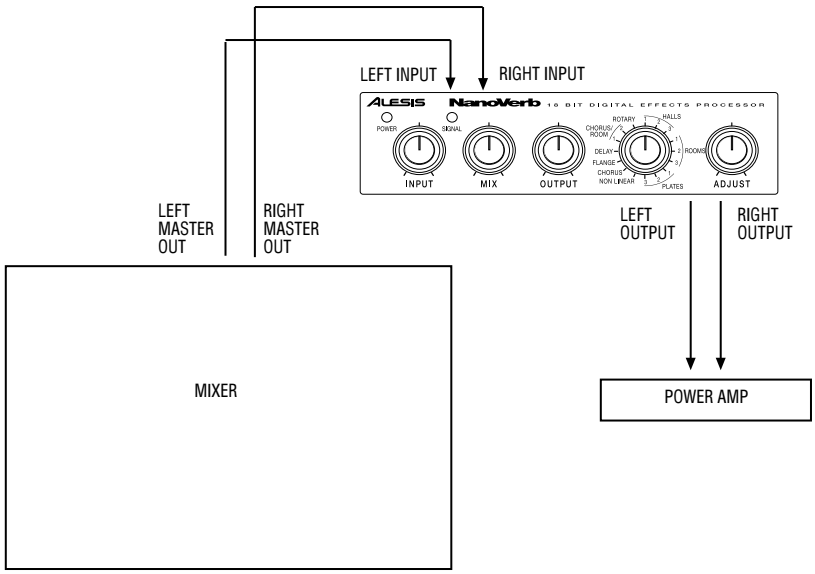
Usually, insert connections require a special, stereo-splitting Y-cord to be connected (one stereo plug provides both send and return while two mono plugs connect separately to the effects unit’s input and output). These are known as TRS connectors (tip-ring-sleeve). The tip of the stereo plug carries the send or output of the insert jack, while the ring carries back the return. The sleeve represents a common ground for both signals.
This involves connecting a 1/4" TRS (tip-ring-sleeve) Y-cable to the Insert jack of a single channel on a mixing console. The other end of the cable (which splits into two, 1/4" mono connectors) are connected to the [LEFT] input and [LEFT] output, respectively. If you do not hear any audio after making these connections, swap the input and output cables at the NanoVerb, as these may be wired backwards. If the cable is color-coded, usually the red jack represents the send (which connects to the NanoVerb’s input) and black is the return (which connects to the output).

Once the proper connection has been made, you must set the desired "wet/dry" balance using the NanoVerb's [MIX] control. The [INPUT] and [OUTPUT] controls of the NanoVerb should be set for unity gain: the volume when the Insert jack is plugged in the mixer should be approximately the same as when the NanoVerb is out of the circuit.



Using Main Outputs

When you want to add effects to everything on the mixer, you can connect the NanoVerb between the mixer's outputs and the amplifier's or tape machine's inputs. This is done by using two 1/4" mono cables to connect the Left and Right Main Outputs of the mixing console to the [LEFT/MONO] and [RIGHT] inputs of the NanoVerb. The [LEFT] and [RIGHT] outputs of the NanoVerb are then connected to a stereo amplifier, or two input channels of another mixing console (for sub-mixing applications).



Using the NanoVerb with a Powered Mixer

You can dramatically improve the sound quality of a powered mixer by connecting a digital effects units such as the NanoVerb to it in the same way you would connect it to a regular mixer, with one important note:

J *Never connect an output intended for a loudspeaker (the power amplifier output) to the input of the NanoVerb. This will cause damage that will not be covered by the warranty.*

Consult the manual of your mixer for more information. Generally, the best way is to connect the "Effect Out" jack of the mixer to the NanoVerb following the procedure on page 14. If the system is not stereo, you may connect only the [LEFT] output of the NanoVerb to an "Effect Return" or other input. You will get a slightly deeper, more complex effect if you can connect both the [LEFT] and [RIGHT] outputs of the NanoVerb to inputs on the mixer.

Avoiding Ground Loops

In today's studio, where it seems every piece of equipment has complex routing and computer logic, there are many opportunities for ground loop problems to occur. These show up as hums, buzzes or sometimes radio reception and can occur if a piece of equipment "sees" two or more different paths to ground. While there are methods to virtually eliminate ground loops and stray radio frequency interference, most of the professional methods are expensive and involve installing a separate power source just for the sound system. Here are some easy helpful hints that a professional studio installer might use to keep those stray hums and buzzes to a minimum.

¿ KEEP ALL ELECTRONICS OF THE SOUND SYSTEM ON THE SAME AC ELECTRICAL CIRCUIT. Most stray hums and buzzes happen as a result of different parts of the sound system being plugged into outlets of different AC circuits. If any noise generating devices such as air conditioners, refrigerators, neon lights, etc., are already plugged into one of these circuits, you then have a perfect condition for stray buzzes. Since most electronic devices of a sound system don't require a lot of current (except for power amplifiers), it's usually safe to run a multi-outlet box or two from a *SINGLE* wall outlet and plug in all of the components of your system there.

¡ KEEP AUDIO WIRING AS FAR AWAY FROM AC WIRING AS POSSIBLE. Many hums come from audio cabling being too near AC wiring or the power transformers used by equipment requiring an external supply. If a hum occurs, try moving the audio wiring around to see if the hum ceases or diminishes. If it's not possible to separate the audio and AC wiring in some instances, make sure that the audio wires don't run parallel to any AC wire (they should only cross at right angles, if possible).

¬ TO ELIMINATE HUM IF THE ABOVE HAS FAILED:

A) Disconnect the power from all outboard devices and tape machines except for the mixer and control room monitor power amp.
B) Plug in each tape machine and outboard effects device one at a time. If possible, flip the polarity of the plug of each device (turn it around in the socket) until the quietest position is found.
C) Make sure that all of the audio cables are in good working order. Cables with a detached ground wire will cause a very loud hum!!
D) Keep all cables as short as possible, especially in unbalanced circuits.

If the basic experiments don't uncover the source of the problem, consult your dealer or technician trained in proper studio grounding techniques. In some cases, a "star grounding" scheme must be used, with the mixer at the center of the star providing the shield ground on telescoping shields, which do NOT connect to the chassis ground of other equipment in the system.

Note that the NanoVerb, with its external low-voltage power supply, has no power supply ground. Its power is transformer isolated for safety, so it has no need for a "safety ground". Signal ground is connected to chassis ground at the input and output jacks (as it is in most unbalanced equipment). If the NanoVerb is attached to a metal rack mounting shelf, the assembly shares a common ground with the other equipment in the same rack. In some cases (such as a star ground scheme), you may wish to use nonconductive rack rails or rack isolators to avoid ground loops.

J *To avoid the possibility of electric shock, never defeat the safety ground found on other equipment in the system. When in doubt about proper electrical grounding schemes or the power to your system, consult a qualified, licensed electrician.*

Footswitch

On the rear panel you will find a footswitch jack labeled [BYPASS]. This is a mono jack with connections for a normal momentary footswitch. The footswitch must be plugged in before the NanoVerb has its power turned on.

You should *not* use the footswitch supplied with a guitar amplifier, as these are typically latching type footswitches. You can tell a latching footswitch from an unlatched type when it takes two presses to enable any of the functions (Bypass, etc.). Also, these footswitches usually “click” when stepped on. Use only Momentary (non-latching) footswitches with the NanoVerb.

Pressing the footswitch will toggle Bypass mode on and off. When Bypass mode is activated, the effects will mute but the direct signal will continue going through the unit. Bypass turns off any effects going to the output, and is useful for turning off delay for a certain part of a song, for example.

CHAPTER 3

OVERVIEW OF PROGRAMS

Reverb Effects

Reverb is made up of a large number of distinct echoes, called reflections. In a natural acoustic space, each reflection's amplitude and brightness decays over time. This decaying action is influenced by the room size, the location of the sound source in the room, the hardness of the walls, and many other factors. The NanoVerb offers the following types of reverberation:

Concert Hall (3 Programs)

This is a simulation of a large concert hall. Halls tend to be large rooms with lots of reflective surfaces, where sounds can swim around, changing timbre over time. This is a classic reverb which sounds good on just about anything. Try it on vocals, drums, acoustic, electric, or orchestral instruments.

Hall 1 - This is a large bright hall program. It works well for almost anything, try it on drums, guitars or vocals.
Hall 2 - This is a warmer hall program. It especially adds depth and character to acoustic guitars and pianos with it's decay set long.
Hall 3 - The third program is a medium hall with 12ms of predelay before the reverb starts. It sounds great on big rock snares, but try it on vocals and electric guitar too.

Real Room (3 Programs)

This algorithm gives you the sound of a medium size studio room. This algorithm uses a lot of processing power for a rich sound and smooth decay. It has a punchier, bigger sound than a hall reverb, which makes it good for rock and dance music. The attack is also more reflective. It sounds good on drums, keyboards and guitars.

Room 1 - This hardwood studio room has a lot of early reflection slap for big drum sounds. It also works well for acoustic instruments, especially with the decay turned up.
Room 2 - This program is perfect for adding a little ambiance to a dry track. Try it on antiseptic synth sounds or on dry, unplugged mixes with the decay set short.
Room 3 - Ideal for acoustic guitars and classical instruments, this program emulates a warmer studio room.

Plate Reverb (3 Programs)

This is a simulation of a classic echo plate, a 4' by 8' suspended sheet of metal with transducers at either end used to produce reverb. Popular in the 1970's, it is still prized for its transparent sound, particularly on vocals and guitars. It works well for a lush lead vocal, piano, or guitar, especially when looking for a classic rock and roll sound.

Plate 1 - The first program is a classic bright vocal plate for pristine lead and background vocals.
Plate 2 - A warmer variation of the previous program, great for adding sustain on acoustic guitar and strings.
Plate 3 - This program is a more realistic simulation of a vintage tube plate reverb. It has very little bottom end, which makes it great for snappy snares and skinny guitars.

Nonlinear (1 Program)

In the mid '80s, a certain British producer/engineer (who shall remain anonymous) discovered a clever way of creating a huge drum sound. He would place the drum set in a large, reverberant room, mic the room and chop off the end of the reverb tail with a noise gate. When this sound caught on, digital reverbs began to be released with a "Nonlinear" program, which simulated this effect. In the end their simulation became more widely used than the effect it was trying to emulate, and the non linear reverb earned it's place in effects history.

Non Linear- This is a classic example of the mid-80's "Nonlin" gate program. It is most commonly used on snares and toms, but can also spice up brass stabs and percussion.

Reverb Parameter Adjust

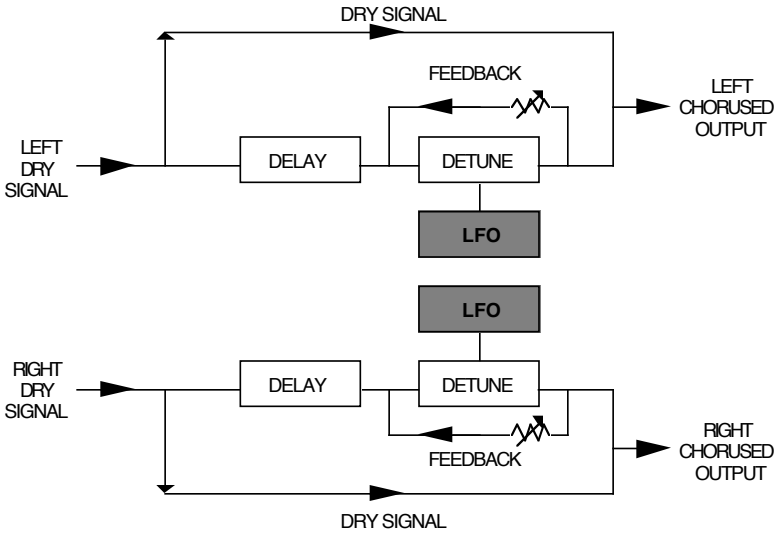
Decay

The reverb decay determines how long the reverb will sound before it dies away. Turning up the reverb decay will have the effect of increasing the room's size. Generally, classical, jazz, and ballad styles will use longer decay times than up-tempo rock or dance music.

Pitch Based Effects (5 Programs)

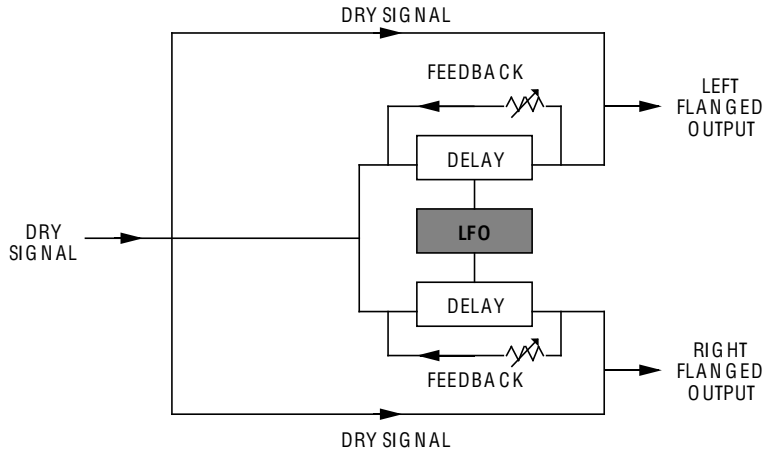
Pitch based effects alter the pitch and delay of a signal in various ways to produce “layered” timbres that are more complex than the original signal. Some of these effects are achieved by splitting the signal into at least two parts, effecting the pitch of one of the parts, then mixing them back together. This eventual mixing is essential since the overall sound of the effect is achieved by the difference between the dry, uneffected signal and the effects signal. Therefore, when using chorus or flange, it’s best to keep the mix of effected and direct signal at equal strength. This could mean setting the [MIX] control at 50% of the NanoVerb on an instrument setup, or raising the effect return on a mixer.

Chorus- The chorus effect is achieved by splitting the signal into four parts with a dry signal and a separate detuning section for both left and right channels. The detuning is further effected by being modulated by an LFO (low frequency oscillator) which causes the detuning to vary. The NanoVerb’s chorus has individual LFOs controlling the left and right sides, set at different rates. This effect, called true stereo chorus, often has a wider stereo image than regular stereo chorus effects. When the Rate is changed on a true stereo chorus, the chorus rate difference between the left and right sides is maintained. *Note:* This chorus processes the left and right sides individually, so any stereo imaging will be maintained.



Flange- First used in the 1960s, “flanging” was achieved by the use of two tape recorders that would record and play back the same program in synchronization. By slowing down one tape machine, and then letting it catch up with the other, different phase cancellations would occur at different frequencies. Since the slowing down of the tape machines was done by hand pressure against the flanges of the tape supply reels, the term “flanging” came into being.

Flanging is similar to chorusing , but modulates the delayed signal over a much shorter delay range (typically 0-12 ms). This produces a “jet airplane”-like sound. In the case of the NanoVerb's flange, the signal is split into four parts with a stereo dry signal and a separate delay section for both left and right channels with one channel flanging up while the other channel flanges down. Once again, this causes the effect to become more pronounced and dramatic.



Rotary- The Rotary effect emulates a rotating speaker. This effect was extremely popular during the 1960s and was achieved by mechanically rotating the speakers to produce complex timbral changes. The lezlie speaker system is most often used with tone-wheel organs, but is occasionally used for guitar amplification as well. When changing the speed between fast and slow, the effect will slowly ramp to the new speed rather than change abruptly, just as the original would do. *Note:* When using the Rotary program, the Mix parameter should be turned all the way to the right.

Chorus/Room 1- The first multieffects program is a layered true stereo chorus and large room reverb. It works great on guitars, synths and electric pianos.

Chorus/Room 2- The other multieffects program adds a delay to the chorus/room sound for a different flavor. It works well for slow, funky guitars or big ballad solos.

Pitch-Based Parameter Adjust

On the chorus and flange programs, the Rate control sets the speed of the chorus or flanging sweep. When the chorus rate is increased, the depth is similarly decreased to maintain a constant pitch shift. On the Rotary program, the [ADJUST] knob controls the speed of the Lezlie motor, either fast or slow. On the Chorus/Room 1 program the [ADJUST] knob edits the reverb decay time, where on the Chorus/Room 2 program [ADJUST] edits the delay time.

Delay (1 Program)

Delay is a discrete echo repeat, unlike the rapid wash of repeats that create reverb effects. It is useful for adding depth to a track or performance if reverb is adding too much coloration to the sound.

Delay- This program provides a delay of up to 1270 ms. The delay time can be adjusted in 10 millisecond increments. This is a useful utility program which can add space to vocals or instruments without "muddying up" a mix.

Delay Parameter Adjust

Time

This control sets the time between the input signal and the first delay tap.

CHAPTER 4

DESCRIPTION OF CONTROLS

Front Panel

Input Level

The [INPUT] Level controls the level of the signal being fed into the NanoVerb. The NanoVerb can operate with signal levels anywhere from +4dBu pro audio gear to -20 dBV guitar level signals. To set the input level, watch the [SIGNAL] LED while adjusting the [INPUT] level (see below).

Mix Level

The [MIX] Level controls the balance between the uneffected signal coming through the inputs and the effects being generated by the NanoVerb. When [MIX] is turned all the way to the left, the input signal will be sent straight to the output with no effects added. When [MIX] is turned all the way to right, only the effects will be sent to the outputs with none of the original input signal mixed in. By keeping the Mix somewhere in the center, a blend of dry and wet signal can be achieved.

With a typical instrument setup (use with a guitar amp, etc.) the Mix is usually set around 12 o'clock. When used with a mixing console, the Mix control should be turned all the way to the right (full wet) so that the effects mix can be controlled from the mixer.

Output Level

The [OUTPUT] Level controls the volume of the signal from the outputs. The typical level for this control is 75%, but it can be raised or lowered as necessary.

Signal Level LED

This dual-color LED monitors the signal strength of the unprocessed inputs, and is used in much the same way as the level meters on a standard tape recorder. When the LED turns red, the input signal will be distorted so the [INPUT] level should be backed off. If the green [SIGNAL] LED is barely coming on, the input signal is not high enough and the resulting sound from the NanoVerb may be noisy. Ideally, the [INPUT] signal level should be set so that the [SIGNAL] LED is solid green when audio is being played into it.

Program Select Knob

The Program Select Knob is used to change programs.

Adjust Knob

The [ADJUST] Knob is used to edit aspects of the currently selected program. For example, on a Concert Hall program, the Adjust knob edits Reverb Decay Time. [ADJUST] is always active, so newly selected programs always read the knob setting.

Rear Panel

Power

This is a plug for connecting the Alesis Model P3 9VAC power supply (supplied). The power supply included with the NanoVerb is compatible with the electrical requirements of the country of purchase, and should be connected to the proper electrical outlet. (In the USA, this is 120VAC.) The correct power supply must be used AT ALL TIMES. Any other power supply might create a fire risk and/or permanently damage your unit. This damage would NOT be covered under your warranty.

Bypass

This is a 1/4" phone jack which connects to a momentary (not latching) footswitch, either normally-open or normally-closed. When the Footswitch is pressed, the NanoVerb will stop producing effects and only the dry signal will pass through the unit. If the Footswitch is pressed again, effects output will continue.

Input (Left/Mono & Right)

These are 1/4" unbalanced phone jacks which connect to sources such as the effects sends of mixing consoles. They may be used with nominal input levels from -20dBV (guitar level) to +4dBu. For mono applications, use the [LEFT/MONO] input.

The [LEFT/MONO] input jack is normalled to the [RIGHT] jack. This means that when nothing is plugged into the [RIGHT] input jack, the signal present at the [LEFT/MONO] input is routed to the [RIGHT] as well.

Output (Left & Right)

These are 1/4" unbalanced phone jacks which connect to devices such as the effects returns on a mixing console or power amplifier inputs. For mono applications, use the [LEFT] output.

CHAPTER 5

TROUBLESHOOTING

Troubleshooting Index

If you experience problems while operating the NanoVerb, please use the following table to locate possible causes and solutions before contacting Alesis Product Support for assistance.

Symptom	Cause	Solution
The Power LED does not light when the unit is powered on.	No power.	Check that the power cable is plugged in properly.
Sound is distorted, Red "Input" LED is lit	Input level is too high.	Turn down the Input Level control.
Sound is excessively noisy, Green "Input" LED barely lit.	Input level is too low	Turn up the Input Level control.
	Output level is too low and Aux Return on mixer is up full.	Turn Output up and reduce Aux Return level on mixer.
No audio is heard.	Bypass function is on with Mix turned 100% wet.	Turn the Mix control to the left or press the Bypass Footswitch.
	Output level is too low.	Turn the Output control to the right.
Hum or noise from output.	Ground loop, unshielded cables.	Try plugging the unit into another power jack or different audio cables.
Unit does not respond to front panel controls.	Unknown software conflict, cosmic rays, or static electricity.	Power down and power up again.

Maintenance/Service

Cleaning

Disconnect the AC cord, then use a damp cloth to clean the NanoVerb's metal and plastic surfaces. For heavy dirt, use a non-abrasive household cleaner such as Formula 409 or Fantastik. DO NOT SPRAY THE CLEANER DIRECTLY ONTO THE FRONT OF THE UNIT AS IT MAY DESTROY THE LUBRICANTS USED IN THE SWITCHES AND CONTROLS! Spray onto a cloth, then use cloth to clean the unit.

Refer All Servicing to Alesis

We believe that the NanoVerb is one of the most reliable multieffects processors that can be made using current technology, and should provide years of trouble-free use. However, should problems occur, DO NOT attempt to service the unit yourself. Service on this product should be performed only by qualified technicians. NO USER-SERVICEABLE PARTS INSIDE.

Obtaining Repair Service

Before contacting Alesis, check over all your connections, and make sure you've read the manual.

Customers in the USA and Canada: If the problem persists, call Alesis USA at 1-310-841-2272 and request the Product Support department. Talk the problem over with one of our technicians; if necessary, you will be given a return order (RO) number and instructions on how to return the unit. All units must be shipped prepaid and COD shipments will not be accepted.

For prompt service, indicate the RO number on the shipping label. Units without an RO will not be accepted. If you do not have the original packing, ship the NanoVerb in a sturdy carton, with shock-absorbing materials such as styrofoam pellets (the kind without CFCs, please) or "bubble-pack" surrounding the unit. Shipping damage caused by inadequate packing is not covered by the Alesis warranty.

Tape a note to the top of the unit describing the problem, include your name and a phone number where Alesis can contact you if necessary, as well as instructions on where you want the product returned. Alesis will pay for standard one-way shipping back to you on any repair covered under the terms of this warranty. Next day service is available for a surcharge.

Field repairs are not normally authorized during the warranty period, and repair attempts by unqualified personnel may invalidate the warranty.

Service address for customers in the USA:

Alesis Product Support
3630 Holdrege Avenue
Los Angeles, CA 90016

Customers outside the USA and Canada:
Contact your local Alesis distributor for any warranty assistance. The Alesis Limited Warranty applies only to products sold to users in the USA and Canada. Customers outside of the USA and Canada are not covered by this Limited Warranty and may or may not be covered by an independent distributor warranty in the country of sale. Do not return products to the factory unless you have been given specific instructions to do so.

SPECIFICATIONS

Electrical

Frequency Response:	±1dB from 20Hz to 20 kHz
Dynamic Range:	>90dB "A" wtg., 20 Hz-22kHz
Distortion:	<0.009% @ 1kHz, nominal level (-12 dBfs) <0.005% @ peak level
Crosstalk:	<90dB below full scale

Input

Number of Channels:	2
Format:	1/4" unbalanced
Nominal Level:	-10 dBV, adjustable to +4 dBu
Maximum Level:	+10 dBV
Impedance:	1MW/channel stereo, 500kW/channel mono

A/D - D/A Conversions

A/D converter:	18 bit Sigma-Delta, 128 times oversampling
D/A converter:	18 bit Sigma-Delta, 8 times oversampling

Output

Number of Channels:	2
Format:	1/4" unbalanced
Maximum Level:	+17.5 dBu
Nominal Level	-20 dBV or +4dBu, front- panel adjustable
Output Impedance:	500 ohms

Front Panel

Controls	INPUT	MIX
	OUTPUT	PROGRAM
	ADJUST	
Indicators	Power LED, Signal Present dual-color LED	

Rear Panel

Input (LEFT/MONO, RIGHT)	1/4" 2-conductor
Output (LEFT, RIGHT)	1/4" 2-conductor
BYPASS	1/4" 2-conductor (accepts normally open/closed momentary footswitches, such as Alesis PD)
Power	9 Volt Power Transformer (Alesis P3)

Processing and Memory

Processor Speed:	3 MIPs (million instructions per second)
Internal processing resolution:	24 bit accumulator
Factory Preset Programs (ROM):	16
Delay memory:	1270 milliseconds
Reverb effects:	Concert Hall, Real Room, Plate Reverb, Nonlinear
Delay effects:	Mono Delay
Pitch effects:	True Stereo Chorus, Stereo Flange, Chorus/Room, Rotary